

Compaq purchases Wang Laboratories facility in Scotland

There are many ways to expand operations, and Compaq Scotland is demonstrating two of them — the purchase of additional existing facilities announced Sept. 14 as well as the major construction program at its Erskine site announced in May.

To support its growing international service and repair operations, Compaq purchased the former Wang Laboratories manufacturing facility in Stirling near its existing Erskine manufacturing plant. When the Stirling complex opens at the end of the year, it will create 125 jobs involving a variety of skills. It will serve as a base for the company's European service, spares and repair operations.

The acquisition of the Wang facility comes approximately three months after the \$37.5 million expansion of the Erskine manufacturing and office complex was announced. Expansion is proceeding on schedule, and will bring total plant and office space in Erskine to 490,000 square feet when completed in mid-1990.

Together, the Stirling and Erskine facilities will bring Compaq Scotland to 625,000 square feet of space.

"The acquisition of the Stirling plant operations offers us a ready-built and operational facility with generous room for expansion," says Eckhard Pfeiffer, President, Europe and International Division. "As demand for our products continues to increase throughout the international arena, this facility offers us a quick ramp-up to better meet our subsidiary, dealer and customer needs."

Company's donation aids library campaign



From left, Marc Shapiro, Joe Nabil and David M. Henington, Library Director. The money bags represent the funds already raised.

Compaq recently donated \$388,000 worth of COMPAQ DESKPRO computers to the Houston Public Library, aiding in the campaign to raise \$8.1 million to benefit the 33-branch library system.

Houston Mayor Kathryn Whitmire was on hand for announcement festivities held at the Central Library in downtown Houston.

Joe Nabil, Director of Corporate Relations, said during the August ceremony about the donation of the 160 computers, "We are honored to be a part

of such a fine organization in our community, and we have great hopes that this donation will enhance our city's library system's effort in providing better services to Houstonians."

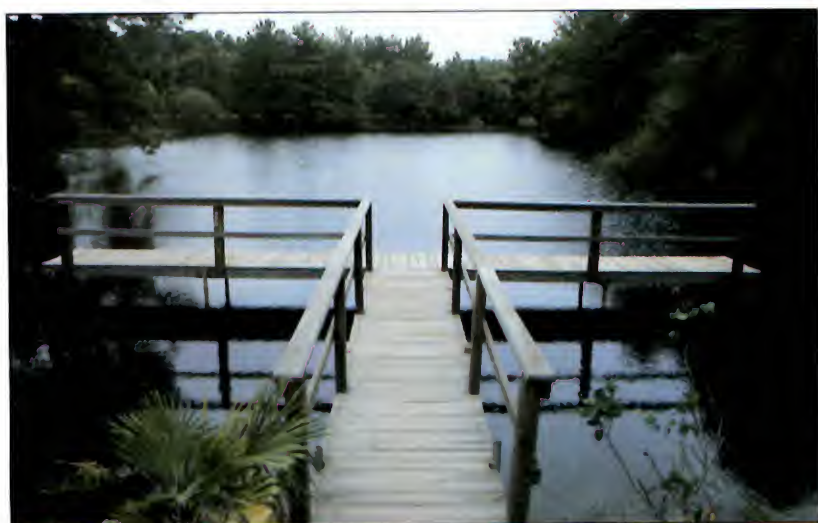
Texas Commerce Bank-Houston Chairman Marc Shapiro, chairman of the Enhancement Campaign for the Houston Public Library, said the company's donation was "the largest corporate gift in the library's history."

The donation of these computers will make the planned on-line catalogue system possible.



Mayor Kathryn Whitmire

MARSHALL TRACT



The Marshall Tract, the property Compaq recently purchased across the street from the main campus in Houston, offers many beautiful sights. See photos, page 8.

Quality: setting a standard

Q. How do you find out if a product is of high quality?

A. You ask a customer.

It sounds simple, but it's one of the most commonly overlooked precepts in business today. The only meaningful measure of a product's quality is in the compliments and complaints of its customers.

"The customer defines quality," explains Murray Francois, Senior Vice President of Corporate Quality and Materials. "If the customer doesn't perceive the product as high-quality, then it isn't."

The customer's definition of quality may not be the same as the engineer's, the designer's or the manufacturer's. But quality is what the customer says it is.

And if the customer doesn't see the right kind of quality, he won't buy the product. It's that simple.

Satisfying customer needs isn't easy. Doing it consistently means identifying one's customers, understanding what they require and then delivering what they need. It's a lesson that many companies ignore, but it's one that's crucial to Compaq success.

Demand for quality grows

"Today, we know that our customers have a higher level of expectation for quality than ever before," notes Francois. "As companies achieve new levels in reliability, performance, service and pricing,

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Computer-Aided Engineering classes taught by new group

If a personal computer designed by a personal computer sounds a bit like something for the year 2001, please re-check your calendar. It's happening today at Compaq.

Although engineers and systems people actually design computers, Compaq engineers are using their computers in highly sophisticated applications running on their 386-based workstations. This software — called tools in the Computer-Aided Engineering (CAE) world — allows modeling of everything from ASICs (application-specific integrated circuits) to the plastic covers of Compaq systems. These CAE tools could be thought of as comparable to word processing for writing. They're simply tools to help get a job done.

Even more important, these designs can be tested and modified as software models before they are reproduced as a prototype unit.

This capability reduces significantly the time-to-market cycle for products. It also makes possible technological advances for which Compaq is famous. One example is the transformation of the 16-bit VGA board into the VGC (Video Graphics Controller) ASIC, which in simpler terms means it is now a chip — not a board. This saves expansion slots for other uses. The COMPAQ SLT/286 incorporates this new technology, making VGA graphics possible on a laptop.

To instruct more people how to work in this area, Compaq has formed a

group to teach CAE. Part of the company's entire CAE group, the teaching group is chartered to teach engineers to use CAE tools. Instruction takes place in Houston.

The course "Introduction to CAE" presents the basics of UNIX, X Windows and the Valid Logic Systems application used for schematic capture and packaging. Several courses leverage off this

basic class and are geared toward preparing designs for production by specific vendors.

Verilog is another application being

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Asian dealer forum

Compaq Computer Asia recently held its 1989 dealer forum in Singapore. Nine Far Eastern countries were represented and 24 dealers attended. P.T. Elang Mahkota Komputer, an Indonesian Authorized Dealer, was presented the 1988 dealer award for most outstanding sales achievement by Kevin Ellington, Senior Vice President. Besides offering various company updates, the forum allowed new Authorized Dealers to get acquainted with Compaq Asia's new Sales, Marketing, Operations and Technical staff.

Letters proclaim products' dependability, ruggedness

It's always nice to hear how impressive COMPAQ products are, and when someone takes the time to write a letter praising our products, it really gives us a lift. We all deserve a pat on the back now and then.

The following two letters were recently received by the Customer Relations Department at the corporate office in Houston from two end-users.

Dear Compaq:

A recent experience with one of your computer models has made me a firm believer in your product. It was quite a test of the dependability and ruggedness of your line.

After months of pestering our regional office for funds to purchase a system, we were turned down. As a consolation they informed us of a "used portable" they could loan us. I was excited to find out that it was a COMPAQ. All my computer friends rate your line at the top.

When it finally arrived at our office, I was horrified to see a badly mangled box sitting in my supervisor's office. Opening the top I was further shocked to find the COMPAQ PLUS in a state of disassembly. The keyboard/bottom was not attached, but stuffed alongside the case. The top cover was loose. The two halves of the right side case were popped out to the point where the sliding door over the ports would not budge.

I picked the keyboard up and noticed the "I/!" key missing. Some kind of foreign material coated several of the

keys. I suspected coffee or soda. When I picked the unit up, I heard rattling sounds inside. I wondered what kind of shape the hard drive would be in. Checking the box, I found the missing key along with the spring in one corner. It was not hard to find, for the shipping box contained nothing else. No attempt had been made to pad or protect the unit — it had just been tossed in an oversized box and sealed with strapping tape.

We decided to see if the computer would boot up.

Imagine our surprise when the unit powered up and ran without a single problem! Everything worked. This may not be unusual to you, but to those of us in the office with computer experience, it was just short of amazing. The 10-MB hard drive was 80% full of various programs either forgotten or written off. I quickly did a <chkdsk> on drive C and it reported no bad sectors. Another minor miracle. Being the "fix-it" guy here, I began a closer examination. The more I found, the more impressed I became.

From my inspection I can only conclude that the unit fell from a considerable height. I became aware of this when attempting to insert a 5 1/4-inch disk in the floppy drive. The cover of the drive looked fine; it was the position that was wrong. The unit was below the front cover frame so that sliding in a floppy disk looked impossible. I used my thumb in the depression on the drive cover to raise the drive enough to get a disk in and check out the drive. It reads and writes perfectly.

Satisfied the computer was operating normally, I started looking internally for reasons for the 5 1/4-inch drive misalignment.

A short time later I noticed a curious bow in the entire frame of the computer. From the bottom it was obvious the mounts of the 5 1/4-inch drive had been bent down as a result of the fall. Gentle pressure was enough to get the drive back in its proper place.

The circuit board on the left of the monitor was loose. Two of the plastic mounts had their heads snapped loose from the board. They were the source of the mysterious rattling first heard from the computer. Two of the three add-in boards in the rear had sprung loose from their plastic end guides. The guides themselves were knocked loose from the mounting holes. Simple reinsertion of the boards was all that was required.

After several hours of realigning, twisting, pulling and cleaning, we now have a fairly respectable unit. This entire experience will certainly go down in my book as one of the most remarkable demonstrations of a well-engineered product.

Did some of Compaq's engineers come from Timex? "Takes a licking and keeps on ticking" is certainly an apt phrase for this portable. In this age of ever-increasing examples of "built-in obsolescence," it is refreshing to find a product such as yours.

Jeff Poplin
North Carolina

Dear Compaq:

This is an unsolicited testimonial to your product, which has proven able to withstand stress, wear and tear and general mayhem, and still function.

I own a COMPAQ Portable with 128-K RAM and 640-K REM on two floppy disks. I purchased this machine in 1986 in Berkeley, California, and brought it to China with me in fall, 1988.

When, under great stress, I left Beijing for Hong Kong with two days notice, I packed what I could fit into a suitcase and took my COMPAQ as carry-on luggage. During a hasty trip to the airport bus, the computer dropped off a luggage dolly and fell about four feet onto asphalt with a loud crash. Then, during check-in procedures at Beijing Airport, the keyboard came unclasped from the body of the computer and fell about a foot to the ground. This reoccurred on the airplane and when I landed in Hong Kong.

I checked the computer for two weeks at the baggage section of the Hong Kong airport, and when I picked it up I found the keyboard had dropped again and the airport baggage handlers had taped it closed.

I took the computer back to Beijing, where I am working, and with great apprehension, re-connected it and turned it on. To my shock and delight, it works!

I was already pleased with the performance of this machine. Now I'm even more delighted. It's as sturdy and tough as I was told it would be.

Joan L. Aragon
China

Company mail system revamped for greater efficiency

By now, most Compaq employees know the importance of flexibility in the face of rapid growth and change. The most recent change due to growth is an overhaul of the company's mail service.

Beginning Oct. 30, all employees will get a new mail code to go along with the new mail service program, "Quick Six."

The mail codes will be based on a six-digit "address." The new number will replace the current four-digit code and will indicate the building, floor and work group. The three elements of the code will be represented by two numbers each. A code of 010203, for example, will indicate the person is in building one, on the second floor, in group three.

All buildings will be assigned a number and each regional and international office will be treated as a separate floor of a building.

The current system allocates codes in numerical order, allowing for no distinction in location.

When the new system is implemented, the Mail Services Department will be able to improve service dramatically. The goal, says George Kapacinkas, Supervisor of Mail Services and Vehicle Management, is to turn around all in-house mail within two mail deliveries or six to eight hours.

"It really is the Ben Franklin way of doing things. It's very manual," he says



Mail Services employees pictured are, from foreground, Jimmy Whitehead, Melissa Kelly, Cynthia Heiney and Greg Warren.

of the current system. "We're straining our people right now."

The current system was adequate when the service first began, Kapacinkas says, with 20 mail codes. Now, he adds, there are 330.

Because of space shortages on the main campus, Mail Services, now located in the CCA5 basement in Houston, will

move off-site to a building on Louetta Road in November. Mail Services will no longer deliver the mail, just process it. Material handlers and drivers of the Office Services Department will deliver the mail as well as supplies.

A data base will allow Mail Services to share information with the Facilities, Phone Services and Human Resources

Information Services departments.

A new internal directory will be delivered when the codes change.

One other change employees will have to endure, Kapacinkas says, is "you can no longer take your mail code with you when you move." He says questions concerning the new system should be directed to Mail Services, 374-8320.

Quality: setting the standard in customer satisfaction

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the standards have changed. It becomes difficult to compete unless you have a high-quality product."

According to Francois, dedication to quality and customer satisfaction began when Compaq was founded. "Each decision — whether it involved computer design, employee relations, facilities, expansion or whatever — has involved an attention to detail that underscores our dedication to quality," he explains. "That commitment is integral to our success."

World Class company

Product quality is necessary in order for customers to be satisfied, but it isn't the only requirement.

"You can't just separate the quality of the product from the quality of the company," explains Francois. "If you have a highly reliable product, but no reliable system to deliver service for that product, for example, you won't be perceived as having a high-quality product."

Surveys and market research consistently show that COMPAQ products are known throughout the world for high quality.

"Such a reputation is not left to chance," insists Francois. "It's earned. A company's image is made up of certain fundamental elements: the product, its performance, timeliness of delivery, and after-sales care and service. These elements influence how our customers perceive our company and our products."

Although Compaq has set quality standards in the PC industry, it's not the only company with a quality product.

Competing companies have made great strides in gaining customer satisfaction.

"Our competitors know what we're doing and have a blueprint to follow for their success," explains Francois. "We don't have such a luxury. When you're Number One, you have no one to aim at, no one to copy. We have to look to the future to figure out the right way to stay ahead."

For Compaq, staying ahead in the rapidly changing personal computer field means constantly refining its original goals — quality and customer satisfaction — and then going further to meet new market and technical conditions.

Delighting the customer

"A lot of manufacturing companies are emphasizing customer satisfaction right now," acknowledges Rick Smith, Corporate Quality Assurance. "That's why it's important for Compaq to do more than simply satisfy the customer. We've got to make sure the customer has a phenomenal experience."

If satisfying an increasingly sophisticated customer is difficult, going *beyond* customer satisfaction is almost impossible. Exceeding customer expectations presents a challenge, since the customer's perception depends on so many different variables.

"As the technology of our products becomes more complex, the demands placed on companies such as Compaq heighten," adds Francois. "Through technology advancements, you're getting greater integration on a chip, which cuts down on the number of things that can

go wrong. But the performance increases we've achieved add to the customer's perception of complexity, and if dealers and users aren't educated to correctly apply that new technology, it may not work as expected. That puts the burden on us to improve our service and education programs."

"We manage the customer's experience and expectations," notes Doug Lowrey, Manager of Corporate Quality Programs. "But to do that, we need to know what that customer expects from our products and services."

Quality benchmarks

There are objective measures of quality that enable product comparability. One quality measure many manufacturing companies use to keep tabs on their products is defects per million (DPM). When working with large numbers, a DPM scale gives a realistic picture of how a company may be satisfying its customers.

"It's important to realize that even though a 99.8 percent level of defect-free product sounds great, it still means that you're making 2,000 mistakes per million units," says Francois. "It's hard to explain to a customer with a defective computer that 998,000 customers have products that are working correctly. We've got to fix that person's computer to his satisfaction."

More worrisome than a dissatisfied customer who complains is one who doesn't. Research shows that customers who are unhappy with a product or service can be a company's worst nightmare.

A study performed by the Technical Assistance Research Programs Institute at the request of the U.S. Office of Consumer Affairs, showed that for every complaint made about a product, 26 unhappy customers did not complain. Although 95 percent of all complainers said they would buy a product again if their complaints were handled quickly, nothing can be done to remedy the negative opinion held by all those unhappy customers who didn't complain.

"We've set a standard for quality for the rest of the industry to aim at," says Francois. "There's no question we've got the best team in the business. It's really up to each of us whether we keep on setting the standard."

Next month, Compaq Total Quality Commitment at work.

BUSINESS	DPM
IRS Tax Advice	66,810
Restaurant bills	10,000
Payroll Processing	9,000
Airline Baggage Handling	5,000
Intel Chips (Electrical)	300
Best Japanese suppliers	.002

Nearly all companies can compare the quality of their products or services in terms of "defects per million." Note how an "insignificant" 6 percent defect rate in IRS taxpayer advice translates into more than 66,000 incorrect or defective pieces of advice per million taxpayers.

Source: Motorola

Harnessing technology — How Compaq creates the optimum system

by Gary Stimac, Senior Vice President

The personal computer industry represents a remarkable merging of technology and human productivity needs. It is a unique case of innovative new technology creating rapid and widespread changes in how people work.

And, as any maker of PCs would tell you, the demand for new technology seems almost insatiable. As quickly as we extend the limits of PC performance, the clamor for even greater performance begins. Our industry is constantly challenged: how to maintain the remarkable balance we've achieved between embracing technology and serving the needs of our customers.

"As quickly as we extend the limits of PC performance, the clamor for even greater performance begins."

We can all cite the results of trying to lead the market to technology. It is rarely the right answer. At Compaq, our answer is to go first to the market — Authorized Dealers, major accounts, end-users, hardware and software developers — to understand their needs. These needs, not our need to force-fit technology to the market, determine our direction.

This market-oriented principle has guided Compaq since the company's inception. The earliest COMPAQ personal computers were designed with specific user needs in mind — compatibility, transportability and reliability. Those early PCs, like COMPAQ products today, were announced only when they demonstrated that they could satisfy the demands of the marketplace.

Our overriding goal is to provide the best in quality and value. We know that introducing a product that doesn't satisfy the needs of our market won't meet that goal. And we believe it's more important to ship the right product than it is to be first to announce new technology.

Satisfying the users

At Compaq, the definition of "the right product" is one that satisfies its users. Intensive market research allows us to learn what that product should be, to fine-tune it and to bring it to market.

Assessing the needs of dealers, individual users and major accounts has also taught us that there are really multiple PC markets. One user group, power users, for example, consistently demands the upper limits of speed, performance and expandability. As the number and types of applications for personal computers have multiplied, this demanding group has challenged dealers and manufacturers to draw every ounce of performance from PC technology. To meet that challenge, high-performance COMPAQ personal computers are designed to make maximum use of the latest technology. We do this in a way that still makes the best use

of the system's other components while maintaining compatibility with the thousands of third-party hardware and software peripherals available.

These system components — such as the processor, memory, coprocessor, video and disk storage subsystems — must be carefully balanced to obtain optimum performance from new technology. This balance enables COMPAQ systems to perform at a consistently high level across a wide range of applications.

Our development philosophy focuses on the creation of a set of "platforms" that can be configured in different ways for different classes of applications. In this way, the same high-performance PC can be a platform that may be configured as a Computer-Assisted Design (CAD) system or as a departmental file server



and still function at the same level. To ensure that this standard platform performs consistently across a wide variety of applications, we make sure that all the subsystems are balanced, or "optimized," because different applications place demands on different system components.

For example, graphics applications most heavily use the processor, numeric coprocessor and video components of a system, while a file server in a local area network environment places demands on the disk drive and the processor. A balanced design eliminates the possibility of a subsystem hindering maximum performance, in either case. A weak link could be the bottleneck that makes the system inappropriate for a particular application.

Each component is important, but none outweighs the others. For example, if you put a slow disk drive in a 33 Mhz 386-based computer, the drive would be a bottleneck to the effective operation of that otherwise speedy system.

Whenever we investigate the feasibility of creating a new product using the latest technology, we examine each potential subsystem and ask ourselves 'How can we get the highest performance out of it?' We have to take a fresh look at the whole system — how each subsystem can interact most effectively with all the others. Then we test and retest to learn how to minimize each subsystem's drain on total system performance.

The priority we place on user needs

applies to existing products as well. As new information and technology become available, we constantly re-examine existing products to help us in designing new options and enhancements.

Designing for the application

An example of how this philosophy works can be found in the design of the Compaq Advanced Graphics Board. Our goal for this design was to maximize effectiveness in the board's primary applications. We knew that a large percentage of COMPAQ products are used with AutoCAD in Computer-Assisted Design, so we looked to see if we could make our product the best PC for the AutoCAD application, among others. As we worked with AutoCAD users, we discovered that they spend a large portion of their time editing drawings. By designing our system so the editing function of AutoCAD was closer to the graphic subsystem, we improved the line-drawing process, making it three to five times faster and speeding the editing process for the user.



Best of both worlds

We have found that protecting their large investments in equipment, software and training is just as important to the user community as performance and flexibility.

Maintaining compatibility with existing computer technology seems an obvious goal today. But compatibility is actually one of the greatest innovations of the PC industry, one virtually unknown in the minicomputer and mainframe worlds.

We have managed to keep our products compatible by understanding the applications in which they are used. Through in-depth research, we become aware of what system areas can be changed without affecting the applications — and which areas of the system must be kept the same. If we see the need to change an area that will affect compatibility, we make subtle architectural adjustments to compensate, so it will look the same to the software. Design of all our systems hinges on compatibility.

Of course, the value we place on compatibility is nothing new — it has guided our design philosophy from the

very beginning. Since the days of the first compatibility testing, we have worked closely with virtually all major software and hardware developers to ensure that our products remain compatible as technology evolves. This close cooperation between Compaq and developers is one of the primary forces guiding the direction of our products.

Creating a personal computer that suits the needs of the market involves a series of design decisions. The key to building a machine that provides the right answer for a given segment of the market lies in getting the most out of each component of the system at a price the market will be willing to pay.

Looking ahead

Exciting new technology continues to appear. The 486 microprocessor chip is appearing in PC products this year. Many industry observers believe that a fully optimized system geared to a 486 chip will outperform any personal computer system — and many minicomputers — on the market. Even these powerful machines will pale in comparison to PCs powered by the more powerful processors that are expected to be unveiled sometime in the mid-1990s.

Optimizing our products to meet the



requirements of demanding new applications, while protecting users' investments in existing standards, continues to be a Compaq priority. We must constantly anticipate the evolution of computer applications and design systems to support them. Our industry's rapid evolution impels us to design systems for applications that may be years down the road. Yet, we believe that industry standard and extended industry standard architecture provide a reliable, cost-effective route to the optimum performance of these advanced applications.

Emerging technology will create profound changes in our industry — changes even more profound than any we have yet experienced. Making the most of these innovations and providing the greatest value to users will require an even higher level of dedication to balancing technology and usefulness. It promises to be an exciting time for us all.

(Reprinted from Compaq Compass Dealer Newsletter)

Regional offices encountering space shortages; many moving

It sometimes seems Compaq is having a hard time keeping up with its phenomenal growth. Buildings are constantly being built on the Houston main campus, and many international subsidiaries have moved to larger facilities or are expanding existing ones. The same holds true for the U.S. regional sales offices.

Most regional and area offices have experienced space shortages. Those which haven't may in the near future. It might cause headaches for the regions, but the constant growth and change attest to the company's soaring success.

Western Operations

The Pleasanton, Cal., regional office is planning a move next year. There are around 50 employees working out of the office, which is currently housed in 16,500 square feet. Renee Ralston, Regional Administration Manager, says Compaq is looking for a new facility of around 50,000 square feet.

"We hope to be moved by the second quarter of 1990," she says. "We're not uncomfortable yet, but by the time we move we will be. We'll be doubled up in some offices."

Eastern Operations

The McLean, Va., regional office recently took over 8,000 additional square feet of space in its present building, bringing the total to 18,500. Dianna Palien, Regional Administration Manager, predicts the office will outgrow the facility by the end of the year.

"We're investigating options. We have 40 employees and will probably have 45 or more by the end of the year," she says.

The area office in Allentown, Pa., will move to Ft. Washington, Pa., this month, Palien says. The new facility is 13,300 square feet, up from 1,300. There are 12 employees working out of the area office.

"Right now we've got two people in every office," Palien says. "We're expecting to grow during the year at an amazing rate."

Southwestern Region

Cindy Payne, Regional Administration Manager for the Southwestern Region, says the Costa Mesa, Cal., office is looking for a new facility offering between 35,000 and 50,000 square feet of space. The office is now housed in a 13,000-square-foot facility. There are 34 employees working out of the Costa Mesa office and Payne expects that number to double by 1993. The current facility, she explains, is full. "We hope to move by early next year," she says.

The area office in Denver will move to a permanent facility by the year's end. The eight employees there are currently working out of five executive suites. There are three new positions open in the area now, Payne says. The new facility will be around 18,000 square feet.

A new office has opened in Phoenix with four employees working out of five executive suites, Payne says. These employees had been working out of their homes, she explains.

South Central Region

Regional sales office employees in Dallas, Texas, recently took over the entire floor of their building, going from 10,000 square feet to 17,000.

However, Regional Administration Manager Judy Cravens says the office is already at capacity. "We need more storage, administration and work space," she says. "We are reviewing our future space needs and how we can meet them."

There are 45 employees based in the Dallas office. Cravens says 10 employees have been hired in the last 12 months.

Compaq has also taken three new executive suites in the St. Louis area, bringing the total to five, Cravens says.

The big news in the region is the decision to open an area office in Houston.

"We're looking at sales facilities in Houston," Cravens says. "It will be away from the corporate office since we need to be near our customers."

When the office opens before the end of the year, there will be six to eight Houston-area sales employees.

Northeastern Region

"We're bursting at the seams here. We are doubled-up, tripled-up; we even have four desks in some offices," says

Regional Administration Manager Mary Ann Mallon of the Lake Success, N.Y., office.

By December, Mallon says the 46 employees will move to a new 37,000-square-foot facility — four times the size of their current 10,000-square-foot building.

"We'll be ready to move, that's for sure. We'll have plenty of room to grow," she says.

The area office in Boston moved in June to a permanent facility of 12,000 square feet with 26 offices. The office had been housed in executive suites. Mallon says the offices are half full now with the 13 employees plus trainers who come from the New York office.

Central Operations

During the first quarter of 1990, the regional office in Schaumburg, Ill., will move to a new 52,000-square-foot facility. The 58 employees are currently working out of 21,000 square feet. "That should hold us for a couple of years," says Jill Markett Tallon, Regional Administration Manager.

The area office in Minneapolis, Minn., will move early next year from seven executive suites to permanent facilities of 12,000 square feet. The Detroit,

Mich., area office, currently housed in 10,000 square feet, is at capacity with its 21 employees, Tallon says.

"We plan to expand in the spring," she says. "We're still studying our needs."

Southeast Region

The regional office in Atlanta moved to a 22,000-square-foot facility in 1988, and Regional Administration Manager Jan Bixby says she's hoping the space will be big enough for another six months.

"We're filling up quicker than we thought," she says. "We have 27 employees, but we will hire three new employees soon."

The area office in Orlando will move during the first quarter of 1990 from 10 executive suites to a facility of around 17,000 square feet. There are 12 area employees working out of that office.

No stopping now

With regional offices expanding their operations — many expanding their training and applications departments — rapid growth continues affecting the entire company. No one is really complaining, though. It adds one more kind of excitement to working at Compaq.

CAE classes offered by new group

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taught. From Gateway Design Automation, Verilog uses programming rather than schematic capture. Its HDL (hardware-design language) is similar to C and Pascal.

In addition to these and other classroom courses with instructors, CAE Training provides computer-based training and video courses in UNIX and

C-language programming. These options permit self-paced learning and supplement classroom offerings.

Special keyboard templates for CAE users are being developed. The group is also evaluating third-party, quick-reference tools and developing quick-reference resources when no suitable outside tool is available.

Sixteen courses are available, and

are aimed at those involved in the design/manufacturing process. Technicians, electrical engineers, mechanical engineers and manufacturing test engineers would be candidates for the classes. Courses last one-half day to three days. A catalog on each course is available on request.

For information, call Debra Maymi, CAE Training Manager, at 713-374-8142.



Entré support award

The Technical Support and Service Order Administration groups of the Customer Support Department were recently honored by Authorized Dealer Entré Computer Centers. The two groups were presented with the award for outstanding service, effort and professionalism during a meeting hosted by Joe Rich, Director of Customer Support. The group members deal exclusively with problem calls from dealers.

Compaq collects some of the finest art in Texas

Where would you expect to find one of the finest art collections in the state of Texas? Perhaps in an exclusive mansion...or a downtown gallery? Guess again, because the answer hangs in the halls of Compaq Computer Corporation.

"Compaq has one of the best corporate art collections in the state," says Karen Ponder, Corporate Art Consultant to the company. "Very few collections encompass the quality, diversity and quantity of one-of-a-kind pieces that the Compaq collection does. Compaq is very dedicated to the quality of the work environment and I feel the art collection makes a big contribution in this area."

Expanding the collection

Ponder has been working with Compaq since 1982 when all that hung on the walls were a few posters and prints. Today, nearly 600 pieces make up the corporate collection including oil paintings, watercolors, handmade paper images, textiles, limited edition lithographs, glass sculpture and most recently, photographs.

The collection began with a Texas-based artist theme in keeping with the company's location. Texas art quickly gave way to more eclectic works as Compaq began to expand. "We want to choose art appropriate to Compaq, and we feel that the collection should reflect the company's expansion and diversification," says Ponder. Originally, art was bought solely from local artists, but soon the search expanded throughout the Southwest, as there wasn't enough art available in Houston to fill all the empty walls. Today, Ponder searches across the U.S. to find art for Compaq.



Karen Ponder, Corporate Art Consultant, tells us about the background of this abstract, which decorates the Corporate Boardroom.

Supporting Houston art

The company, however, still supports the Houston art scene in a big way, purchasing art from almost every local gallery. Many pieces are acquired directly from the artists. Most galleries won't show an artist's work until they have monitored it for up to seven years. Ponder, on the other hand, will often spot an

artist with potential and buy a few of his pieces. "One of the most exciting things for me," she says, "is purchasing art from a relatively unknown artist and, a few years later, seeing his or her work being shown in galleries. This is mutually beneficial, as we are helping new artists early in their careers, and at the same time we are able to buy relatively inexpensive art."

Ponder, along with a group of employees, selects the art work and decides where it will go. They are currently buying and preparing art for buildings CCA7 and CCA8. About 150 new works of art will fill the walls of these two buildings. The first step in this process began months ago when each piece was carefully selected. The next step involved

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Brookhollow employees move, switch work process

The employee move from Houston's Brookhollow to Sommermeyer has been made, leaving about 30 employees at the Brookhollow building.

The move, which relocated over 200 Compaq employees to Sommermeyer during the past two months, combined the Service and Options operations. The refurbishing area, warehouse and Return Materials Authorization operations will remain at Brookhollow until more space is available.

"We had intended to move these employees to Sommermeyer along with everyone else, but there just wasn't enough room," says Bob Moore, Facilities. "Originally we planned to terminate our lease at Brookhollow. Now it looks like we will hold onto portions of Brookhollow, at least for a while."

As they adjust to a new location, Service employees will also be implementing a new work process. These employees had been using a transporter-type procedure, involving multiple individual workstations where one employee performed a single function. These workstations were clustered around a conveyor system that moved computer parts from area to area.

"Everything was independent of the

total process," says Industrial Engineer Gary Walker. "There was no cohesive nature. It was a random way of doing business."

The cell process now being used

allows for more interaction among employees, thereby opening lines of communication. The process calls for a certain number of functional steps to be followed while a product is being tested.

"All employees work in a common area. There's information exchange, and some common tasks can be done by one person or a group of people," Walker explains.



Over 200 Compaq employees recently moved from the Brookhollow facility to Sommermeyer, combining the Service and Options operations.

Employees can help Message Center function at peak

"I don't understand my computer. I need to speak to Rod." "I want my Mommy. My brother is hitting me."

Although Compaq Message Center employees hear many funny and strange requests, they usually handle serious business. The Houston Message Center, like most Compaq departments, is growing fast, making it hard for Message Center employees to keep up with the daily influx of external and internal calls.

Fast pace

The Message Center at company headquarters has grown from four employees in 1984 to 21, including two employees at Century National Bank building and Willowchase. One full-time employee is assigned to keep the internal phone directory updated.

"There are 8,700 phone extensions on the main campus alone. Worldwide, we exceed the 10,000 mark," Ron Matthews, Voice Communications Manager, says. "We have the busiest telephone system in Houston."

According to Janice Dyson, Message Center Supervisor, the five PBX operators who answer all external calls to the main listed phone number answer around 2,600 calls per day. The 16 Message Center agents, who take all messages, give out direct numbers and other company information besides handling all internal calls, answer around 6,300 calls per day.

New procedure

Matthews says the Message Center employees' priority should be to efficiently answer all external calls.

"Although we would like to answer all calls — internal and external — there is an increasing requirement to handle external calls more efficiently. Calls coming in from our customers and other Compaq personnel need to be our first priority," he says.

Employees can help Message Center agents by using the Leave Word Calling (LWC) function on their phones. Employees should push this button or dial *6 when, usually after three rings, a beeping tone sounds. This leaves the caller's name, phone number and time called. It is unnecessary to wait for the call to roll over to an agent if there is no specific message.

Matthews says a new procedure will be introduced late this year to discontinue internal calls automatically rolling

into the Message Center. If the LWC function is not used when someone places an internal call, the call will not roll over to the Message Center. The caller must hang up and dial the Message Center directly to leave a message.

Other measures

Many calls answered by message center agents are from employees calling to check their messages even though message printers are located on each building floor. Matthews says new technology improvements, pricing and user requirements have led to a change in the standard office telephone to digital display sets. These phones allow easy access to a variety of features, including message retrieval. The standard trimline or desktop set is still used in all open or unrestricted areas.

"The plan is to change over to the digital set as resources and dollars are allocated over a two-year period," Matthews says. "It will take awhile with new buildings still going up and all the company moves that occur, but eventually most offices should have digital sets."

Also being reviewed is voicemail, voice response units and other emerging technology. "We are looking at what applications lend themselves to voice services and what problems can be solved efficiently," Matthews says.

Knowing the system

To provide an effective Message Center, Dyson says it is important for all Compaq employees to understand the system.

When going out of town or taking time off, employees should call a message center agent and inform them of the dates they'll be gone and who, if anyone, can receive forwarded calls. Remember, she says, after eight days, all undelivered messages are purged from message printers. Although it is possible to retrieve them, she says it is very difficult and time-consuming. Any employee who will be absent for more than eight days, including weekends, should ask someone else to pull messages.

For complete phone system information, look in the internal directory in the Communications System Information section. For answers to questions, call Dyson at 374-1340.



PBX Operator Lupe Talley

Magazine ranks Compaq at top in investor relations

Institutional Investor magazine has selected Compaq for having one of the best investor relations programs in the U.S. The magazine's editors surveyed more than 150 financial professionals before naming Compaq and 47 other companies as "the best" in maintaining a strong, comprehensive investor relations effort.

On Page 69 of the August issue, *Institutional Investor* editors placed Compaq at the top of the Information Technology/Microcomputers category and wrote of the company, "Good access to management, helpful quarterly analyst meetings. Does best job in industry in terms of quantity and frequency of information dissemination."

Collection brings enjoyment

Continued from page 6
matting and framing many of these pieces, and delivering them intact and undamaged to Compaq. The final phase is the placement of the art in the buildings.

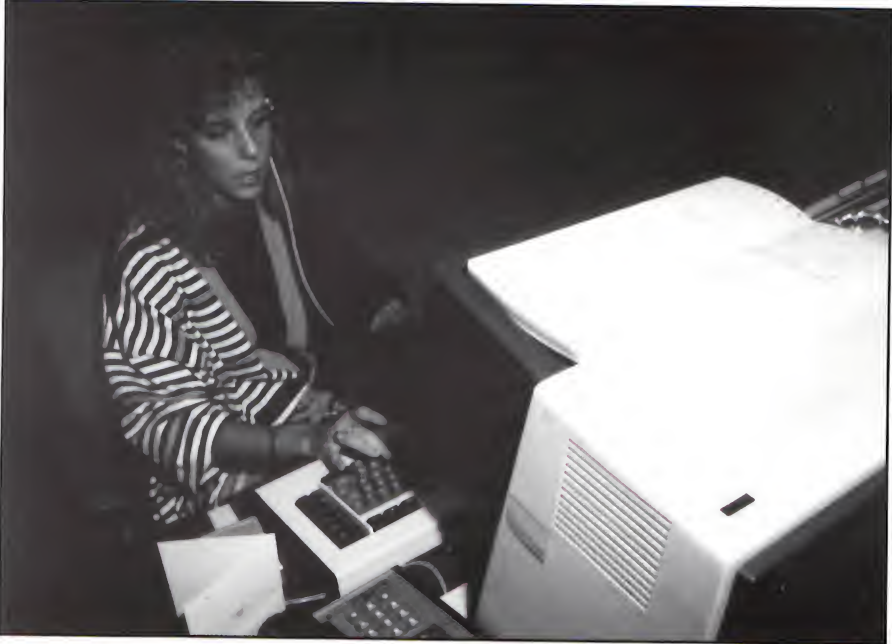
"We try to rotate the art through all the buildings on a regular basis," says Karen Walker, Director of Corporate Facilities, who is responsible for placement of the collection, "but it seems as though, with all of our expansion, people rotate more often than the art does. With all the scheduled office moves, many employees will get a chance to be exposed to new pieces of art, which is one of our goals."

Sharing the culture

Another goal is sharing Compaq culture with employees overseas. As Compaq has expanded internationally, it has

brought its support of the art community along. Compaq recently purchased some works of Texas photography to give to the Compaq Scotland manufacturing facility as a gift. Included in these works are the Callandish Stone series — two black-and-white photographs juxtaposing the huge Callandish stones rising from the moors of Scotland, beside the parallel silhouette of Houston's downtown skyline. The photographs serve as a reminder of the link Compaq provides between the two countries, says Walker.

"It's interesting and admirable to me that Compaq, manufacturer of high-tech computers, is owner of such a varied art collection," says Walker. But this is just another dimension of the philosophy that has guided Compaq from the very beginning — providing its employees with the best possible work environment.



Message Center Agent Mariann Artino

NATURE'S BEST



The Marshall Tract, the 750 acres recently purchased by Compaq across S.H. 249 from the main campus, is rich with natural beauty. A picnic area, many trails, a boat dock and bridges are among the amenities. Environmental studies of plant and animal life are being conducted. The Facilities Department expects about 12,000 employees to be housed on the property when developed. Recreation facilities and lake use for employee fishing and canoeing is being studied along with office buildings and a dining facility. The property has been named Compaq Central Campus.



Noted with regret

Serafin Bazan, 23, Electronic Technician on the second shift in Houston, died Sept. 11. He worked at Compaq for nine months. He is survived by his mother and father and five brothers and sisters.

COMPAQ

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